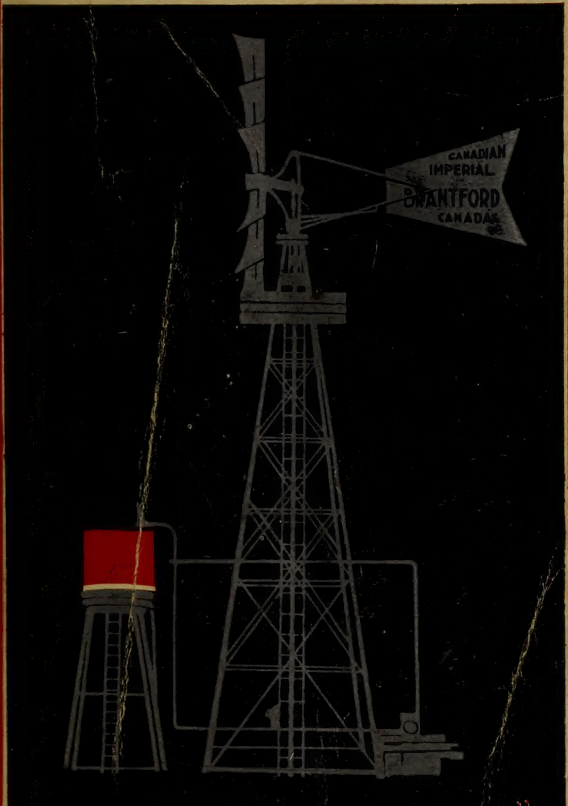
BRANTFORD
WIND MILLS

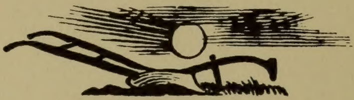


"ENGRAVING OF MILL THAT BEAT THE WORLD"

GOOLD SHAPLEY & MUIR Co.,
LIMITED
BRANTFORD, CANADA.

F5012 [1905?] G696

The EDITH *and* LORNE PIERCE
COLLECTION *of* CANADIANA

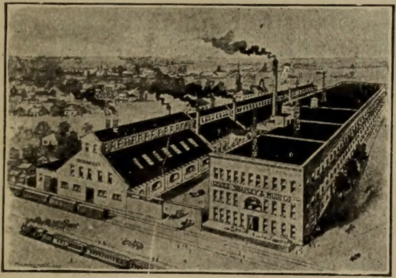


Queen's University at Kingston

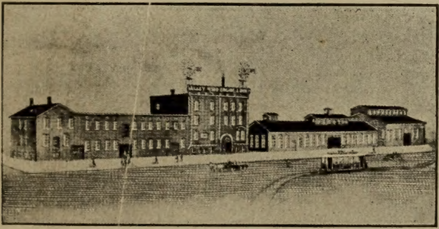
E. L. GOOLD, PRESIDENT
W. H. SHAPLEY, VICE-PRESIDENT
JOHN MUIR, MANAGER
HENRY YEIGH, TREASURER
W. H. WHITAKER, SECRETARY

The GOOLD, SHAPLEY & MUIR CO.

LIMITED



FACTORY AT BRANTFORD, CANADA



FACTORY AT BAY CITY, MICH., U. S. A.

BRANTFORD, CANADA

CABLE ADDRESS: WINDMILL

CODES USED: A B C 4TH AND 5TH EDITION, WESTERN UNION
AND PRIVATE

GREETING

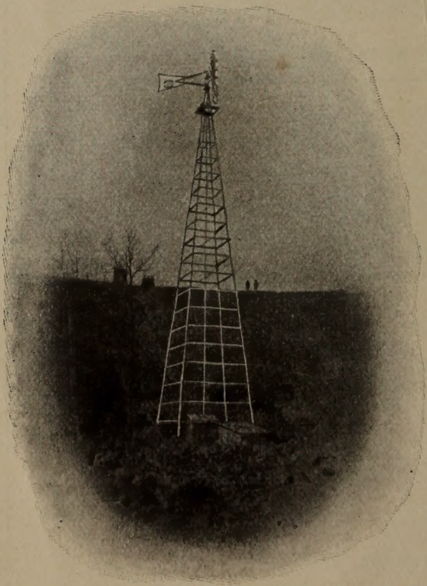
SINCE the issue of our last Windmill Catalogue, in which we asserted the superiority of our line over all competitors, we have had an opportunity to demonstrate that the assertion was a fact. We met all the leading manufacturers of Windmills of the world in two months' trial, held by the Royal Agricultural Society in England, in which you must agree (after careful examination of the conditions governing same, as set forth in this catalogue) was the most thorough and severe trial that any implement or machine has ever undergone. That we succeeded in so overwhelmingly defeating them all by such a large margin, must give nearly as much satisfaction to the Canadian public as it does to ourselves

We will continue to keep our line of goods up to the same high standard as we have in the past, and by so doing maintain the confidence of the public, of which we have received so bountiful an evidence in the past, and which we hope to increase in the future.

Yours sincerely,

Goold, Shapley & Muir Co., Limited

BRANTFORD, CANADA



16 ft. Imperial on 100 ft. Tower
Eugene Galarneau, Pt. Rogue, Que.

WARRANTY

WE GUARANTEE our Windmills to be properly constructed of good material, and as powerful—and will run in as light a wind as any mills made, of the same size, and will automatically take care of themselves in the highest winds; and also guarantee them not to blow down for the term of one year, if erected according to our directions, unless the wind is strong enough to blow down buildings in the immediate vicinity.

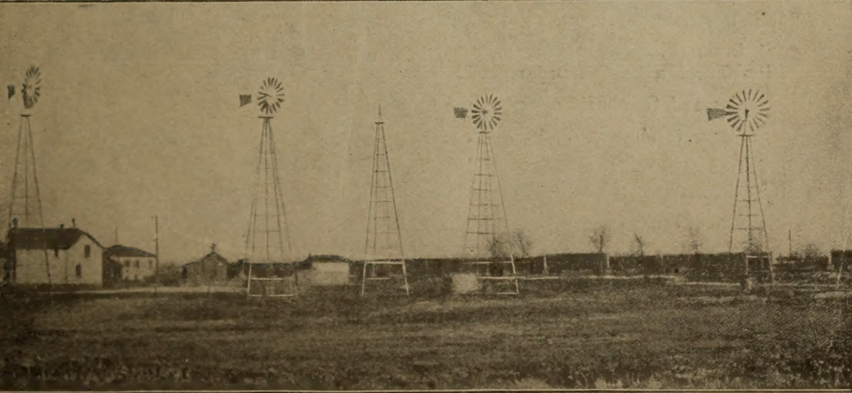
We guarantee our steel towers are made of good material and better constructed than any other, and when erected according to our directions will support the respective sized mills for which they are sold, without buckling (unless the anchorage should give away), for a term of one year.

We absolutely guarantee our Patent Interchangeable Roller and Ball Bearings to run lighter and last longer than any other style of bearings, if given the same care.

We guarantee the Maple Leaf Grinders to do as much work, and as fine, with as little power as any plate grinder of an equal size.

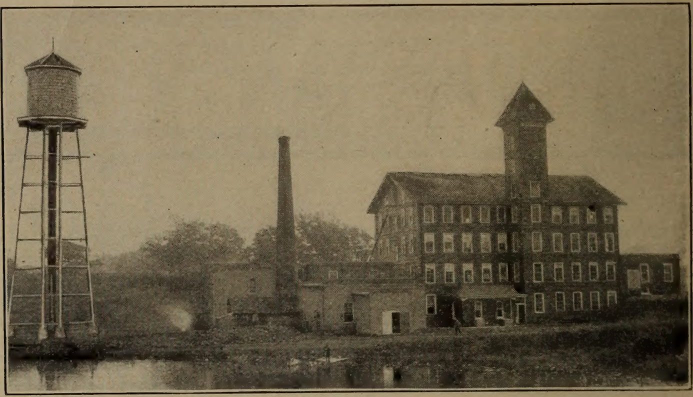
All breakages through bad workmanship, or inferior material will be replaced free of charge when broken parts are sent or shown us. We will not be responsible for any damage done by frost, or neglect to oil, or carelessness of any kind.

Goold, Shapley & Muir Co., Limited



Our Testing Ground for Windmills. Tower shows Wind Gauge on Top.

3028512



Outfit of Penman Mfg. Co., Pt. Dover, Ont.

WE MAKE AND SELL

Galvanized Steel Pumping Windmills fitted with our Patent Roller and Ball Bearings as follows: "Imperial," 8, 10, 12, 14, 16 and 20 feet; "Ideal," 8, 9, 10, 12 feet.

Galvanized Steel Towers, girted every five feet and double braced, three and four posts, for windmills, for windmill and tank in same tower, or tanks only of any capacity, for bells, hose, electric lights, etc. Also heavy towers for power mills.

Galvanized "New Ideal" Power Windmills, fitted with Patent Roller and Ball Bearings in 12, 13, 14, 15 and 16 ft. sizes.

Grain Grinders. Maple Leaf with 8, 10, 11, 13 and 15 inch burrs, and Ideal Duplex Post Grinder.

Gas and Gasoline Engines, 2 to 32 horsepower.

Concrete Mixers. Will compete with any other mixer made.

Iron Pumps—Lift and force for hand and windmill use for all purposes, and also lift and force house cistern pumps.

Wood Tanks—All styles and sizes. Water Boxes.

Brass Cylinders—All sizes, inside and outside fittings.

Water Pipe and Pipe Fittings—Plain or galvanized.

Bee Keepers' Supplies—A full line.

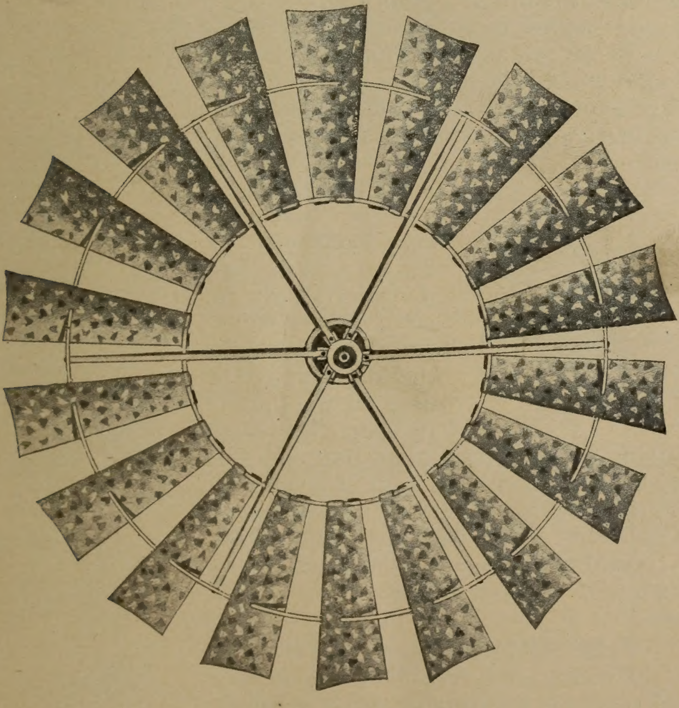
Publishers Canadian Bee Journal.

Goold, Shapley & Muir Co., Limited, Brantford, Can.

FEATURES

In Which BRANTFORD WINDMILLS EXCEL....

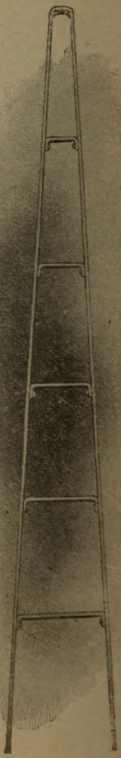
THE WHEEL is the power generator of the windmill. Its construction is of great importance in many ways, as it is, comparatively speaking, what the boiler is to the engine, hence the importance of having first-class material and proper construction. It is necessary that the fan blade has the right amount of material contained in it to give it the proper wind surface, that the blade has the proper curving, and that it be set at the right angle to develop the most power, for an



insufficient amount also robs it of the possibility of this attainment. Our wheels are built upon scientific principles and are no experiment or guess.

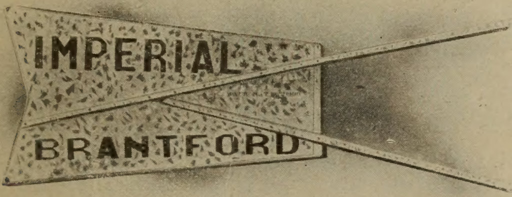
THE BRACKET that holds the sail or fan to the outer rim is an important part of the wheel. It secures the fan to the rim so that it never moves It holds the fan at its proper angle and retains its curve, it is formed of special steel by powerful machinery to fit the curve of the rim and fan, one being at right angles to the other. It is thoroughly riveted to each and the extreme ends pass through slots in the fan and are clinched on the opposite side. This is all done before the galvanizing takes place which practically solders the parts together and makes it as one solid piece.

THE CLIP—The part that fastens inner end of fan to rim is but partially shown in our illlustration. Another plate like the one shown is used on the opposite side, the rivets passing through both plates binding the fan between them and each is riveted to the rim, making a very secure and neat attachment. This part like the bracket, is riveted before being galvanized, making a perfect piece of work.



THE ARMS—The several sections in the wheel are each attached to an arm and there are as many of one as another. The outside rim is bolted to the outer end, while the inner rim is fastened to a bridge near the middle of the arm. The shape (spread) of the arm, its connection to the hub and the number of bridges or braces to stiffen and support it, has everything to do with the staying qualities of the wheel. We use more braces than others on our wheel, arms or spokes. It is a strong arm; able to defend itself against all danger and from destruction; it can be trusted.

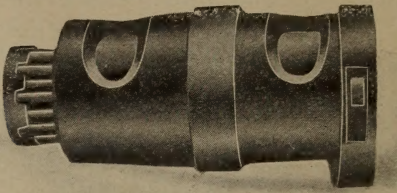
THE VANE—The Vanes on all our windmills are very strong and rigid. They cannot sag or twist. We use a galvanized steel pipe for the backbone and the vane blade is bolted to this by clips which are riveted to the blade on all our mills except the "Imperial," on which we use heavy galvanized steel angles. The angles prevent sagging, and also braces the Vane from twisting sideways. The Vane blade has an outer round steel rim and is supported by angle steel bars running crosswise on one side and lengthwise on the other, riveted securely to the blade, and is galvanized after completion.

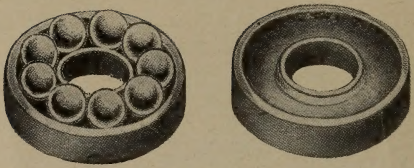


Imperial Vane

THE SHAFTING—The Shafting used in the manufacture of all our mills is the best cold rolled steel and is both true and smooth. This is a very important part in a windmill.

THE BEARINGS—We were the pioneers in Canada in using Roller and Ball Bearings on Windmills and they have proven an unqualified success. They cost far more to manufacture than any other Bearing that has ever been put on a windmill. Our patent No. 48,143, wholly protects us in the use of the Roller bearings on Windmills. All our Bearings run in a hardened steel case which is one of the characteristics of their lasting and easy-running qualities. They require less oil and also give more power than any other Bearing yet introduced. Over ninety-five per cent. of our Windmill output is fitted with these Bearings and we positively and absolutely guarantee them. We show engravings





which fully represent these Bearings. An American concern tried to overcome our patent on these Bearings by boring out the engine and letting the rollers run in the cast iron After a lot of costly experimenting they had to abandon them entirely. For those who have received the benefit of this experiment and are prejudiced against all Roller Bearings we can supply brass or babbit bearings of the best quality at a lower price. Our Roller Bearings have been in successful use for the past ten years, which is a guarantee of their reliability.

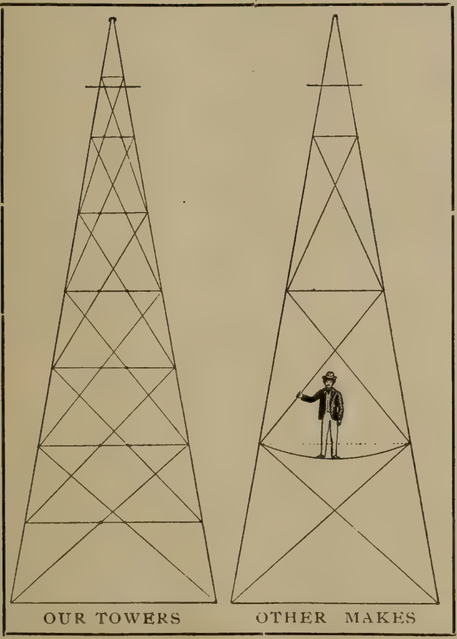
You will notice on the cut there is a pocket at the end, and this is where the bearing is oiled. There are pins fastened to the cage which hold the rollers, and these pins carry up the oil to the rollers. Each pocket will hold enough oil to lubricate for one month, providing the right quality of oil is used for summer and winter work.

GALVANIZING—We galvanize all our wheels, vanes, towers., etc., after completion We have the largest and most expensive galvanizing plant in Canada. There are two pots used—one long one for pipe, tower posts, etc , and one deep one for wheel sections, vanes, etc., These pots contain nearly $5,000 worth of metal, which is kept melted the year around, requiring over two cars of coke a month It would not require one-half of the above plant to galvanize our goods before completion, that is galvanize the rims and blades of a section of a wheel before they were riveted together, and other goods accordingly.

Galvanized Steel Towers

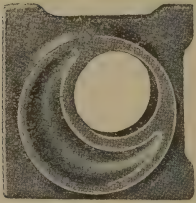
THREE OR FOUR POST

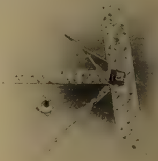
During the years of building steel towers it has been our aim to produce a thoroughly good tower, and the rapid increase of sales, and the strong words of praise from our customers proves our success in this line.



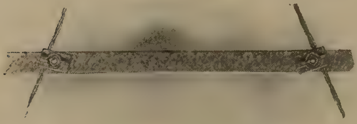
Cut Showing the Difference Between Our Towers and Those of Other Makes

SPECIAL BRACES—We use special galvanized twisted wire braces on our towers because of their great strength and because they expand and contract with the heat and cold, and the tower is kept rigid and everything tight—never slack or overstrained. These wire braces cost more than flat or round iron but are much better than other kinds.





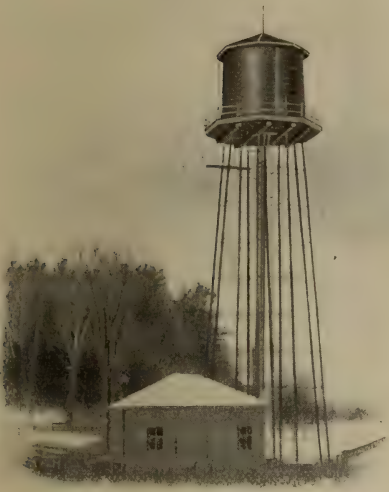
ECCENTRIC WASHERS—This engraving shows the point where the cross girt is bolted to the corner post, and the twisted wire braces are fastened and also tightened by means of the eccentric washers. This eccentric is handy and effective.



CLAMPS—These are used as here shown, on each girt to keep the girts in line and to prevent them from springing up and down or in and out. If the girts do not buckle the corners cannot, unless the distance between the girts is too great. No other towers in the market are so well braced as the "Ideal" and they do not collapse or go down.

ANCHOR FEET—The accompanying engraving shows the anchor foot bolted to the tarred oak plank. This plank is five feet under the ground and the anchor is securely fastened to the same.

GALVANIZING—The galvanizing of our steel towers is all done after the holes are made or after completion, and these holes are galvanized around the same as the rest of the tower.



Ottawa East Waterworks Co., 90 ft. Tower 60,000 Gallon Tank.

The "Ideal" three-post tower is the strongest and best tower in the market. The triangular or three-cornered shape is stronger than the square. The three-post tower can be used for eight and ten-foot pumpers, but is not as good a shape as the four-post for tanks and larger mills, owing to the larger space required to carry the tank.

The two top lengths of every windmill tower (either three or four post) are each 15 feet in length, and 10 foot lengths are added to give greater height. For

Tanks on Roof of our Factory.

instance, there are two fifteen-foot lengths in a thirty-foot tower, and in a forty-foot tower there are two fifteen-foot and one ten-foot lengths. We only make towers in multiples of ten feet in height, as 30, 40, 50, 60, 70, etc.

We make both our three and four-post towers with angle girts every five feet apart, and they have double cross braces.

Featherbone Novelty Co., Toronto

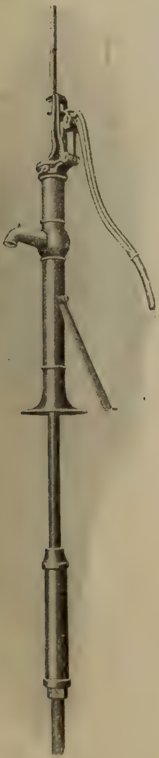
Outfit for Town of Owen Sound Fire Protection.

We present a cut showing the difference between a tower girted every ten feet and single braced, and our tower girted every five feet and double braced (see illustration on page 9) so that any person can see the vast difference it makes in a tower.

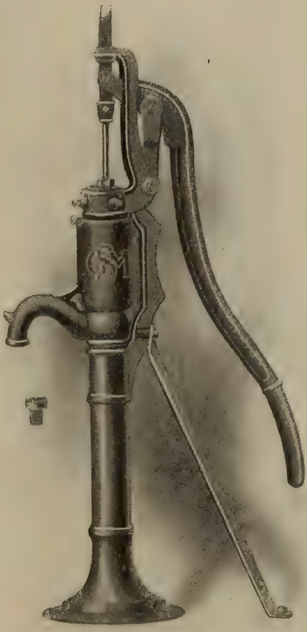
Towers for railway, fire protection and waterworks outfits, etc., are constructed according to capacity of tanks. We can supply any size or style of an outfit of this kind. We show illustrations of a few of the outfits which we have supplied.

High Grade Pumps

A good pump is a very essential part of a windmill outfit. Oftentimes a whole outfit is condemned on account of a poor pump. We have made a special study of pumps for windmill use and have a most up-to-date line. We show a few engravings of some different styles.

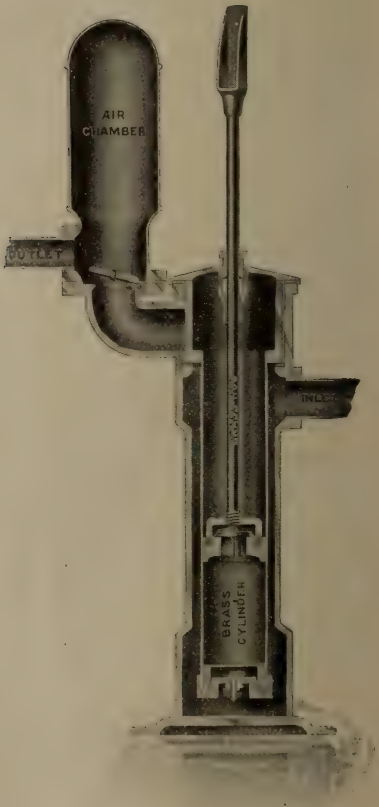


This is what is called our No. 420 Lift Pump. It can be used for delivering water at the spout or into a trough at the well.



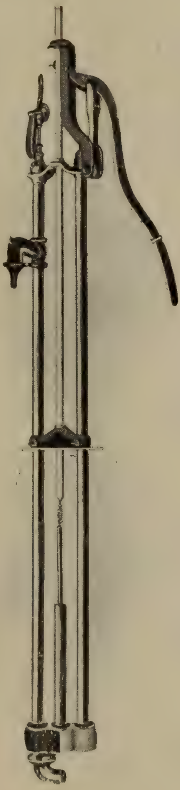
The 422 Force Pump is used for delivery of water at spout and a hose can also be attached for washing buggies, sprinkling, etc. It cannot be used for forcing water a distance.

Syphon Pumps



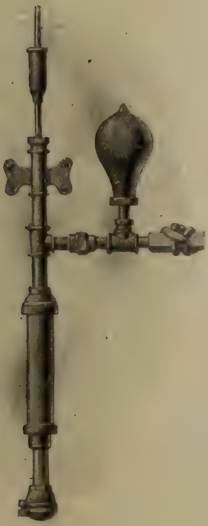
We show two engravings of our Syphon Pumps. The cylinder is placed in standard as shown in open cut, and is easy to get at. It is the best pump for shallow wells where water is to be forced a distance, or drawing water not over twenty-four feet of a lift. This pump cannot lose its priming.

Our No. 416 Three-Way Force Pump is used for delivery of water at the spout and also for forcing water into a tank at distance. A hose can also be attached to the spout.



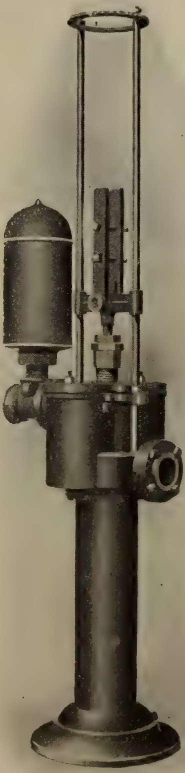
No. 416

The Acme is a double acting pump and is used when large quantities of water are required, such as, for railways, factories, and large windmill outfits. Our 16-ft. Imperial Mill and Acme Pump make a first-class outfit for a town.



No. 400

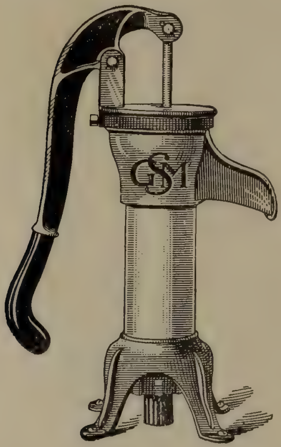
This engraving represents our No. 400 Force Pump for forcing water at a distance only, and is used when water is not required at the well.



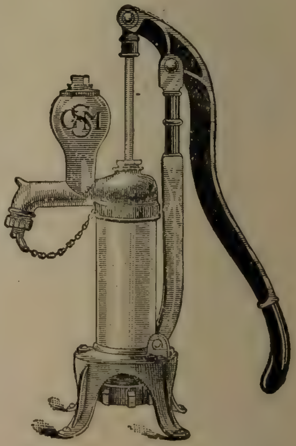
The Acme

"Royal Blue" Pumps

The "Royal Blue" closed top, pitcher spout House Pump is beautiful in design, and of superior quality and workmanship. The cylinders are of nickle-plated seamless brass tubing, three inches in diameter. The spout and handle can be changed to make either a right or a left hand pump. It is fitted for 1 inch or 1¼ inch iron or lead suction pipe. In ordering be sure and state size and kind of pipe. We make this pump in one size only. By lifting the handle it will trip the lever and prevent freezing. The price is $4.00.

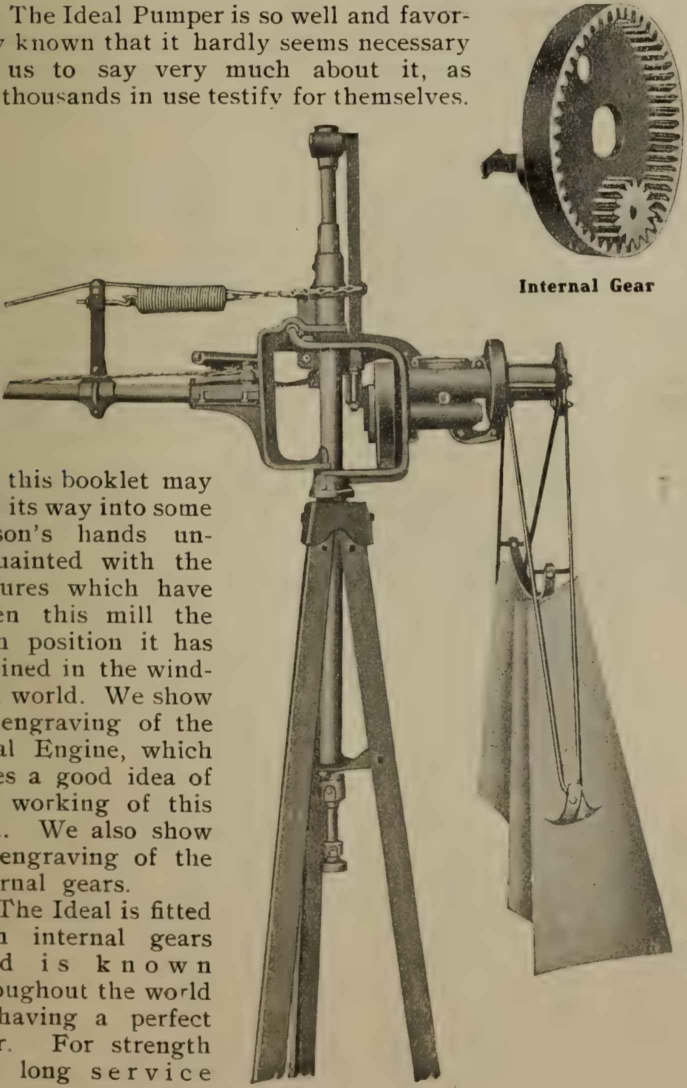


The "Royal Blue" House Force Pump is handsome in appearance and made of the best material. It has a reservoir top and syphon spout which gives a continuous flow of water. The spout and handle can be changed to make it either a right or left hand pump. The pump can be used for forcing water to a tank or bathroom, or attaching a hose or an ordinary pump. For forcing, a brass cap is screwed on the spout and an outlet pipe is attached to the air chamber. The cylinder is nickle-plated, seamless brass tubing and is fitted for 1 inch or 1¼ inch iron or lead pipe as ordered. The pump is made in one size only. To prevent freezing lift handle of pump. The price is $5.00.



The Ideal Pumping Windmill

The Ideal Pumper is so well and favorably known that it hardly seems necessary for us to say very much about it, as the thousands in use testify for themselves.



Internal Gear

But this booklet may find its way into some person's hands unacquainted with the features which have given this mill the high position it has attained in the windmill world. We show an engraving of the Ideal Engine, which gives a good idea of the working of this mill. We also show an engraving of the internal gears.

The Ideal is fitted with internal gears and is known throughout the world as having a perfect gear. For strength and long service

"Ideal" Outfit, CharKow, Russia

there is no other gear on any opposition mill to equal that used on the Ideal. Besides being enclosed to prevent sleet, ice, etc., getting in the cogs and breaking it, there are always double the teeth in mesh that there are in an external geared mill, which means a division of the strain, wear, etc., and increases the life of the mill. It is in a very rare case where we are called upon to repair or replace worn out or broken gears on the Ideal mill, while in open geared mills it is a common occurence and great annoyance, and these open geared mills are represented to be just as good as the Ideal, and people purchase them, ignorant of the real facts, or because the price is a little lower, and only learn by practical experience and heavy repair bills their mistake.

For years we have used our famous Roller and Ball Bearings on the Ideal mill with entire success, but for customers who are influenced by the startling and erroneous statements of our opponents or otherwise, we furnish Interchangeable Babbit Bearings of the very best quality at a reduced price, and which can easily be replaced in case of wear.

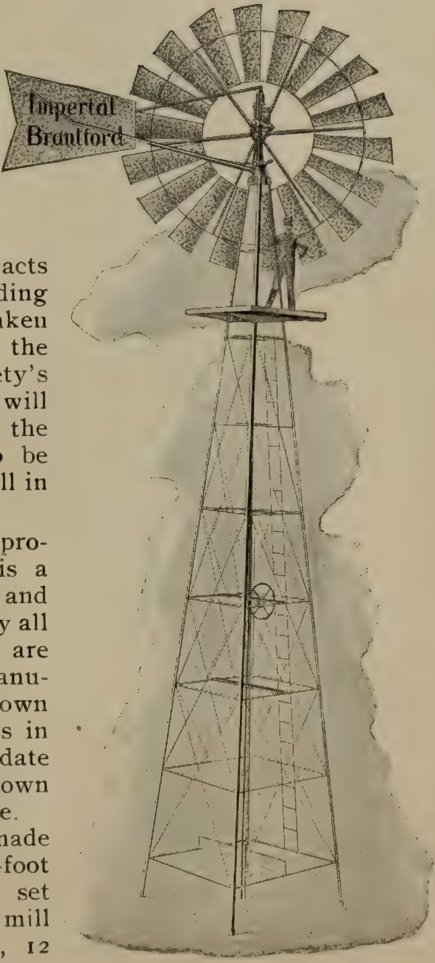
The Ideal is fitted with a very effective brake, which when properly adjusted, holds the mill perfectly still when out of the wind. This is a very important point in a mill for if the mill should happen to move in frosty weather it sometimes pumps enough water to allow the pump to freeze up.

The Ideal is thoroughly galvanized by the process described elsewhere in this catalogue.

We use the same quality of material in the manufacture of the Ideal mill as is used in our other mills, which is the best.

THE IMPERIAL

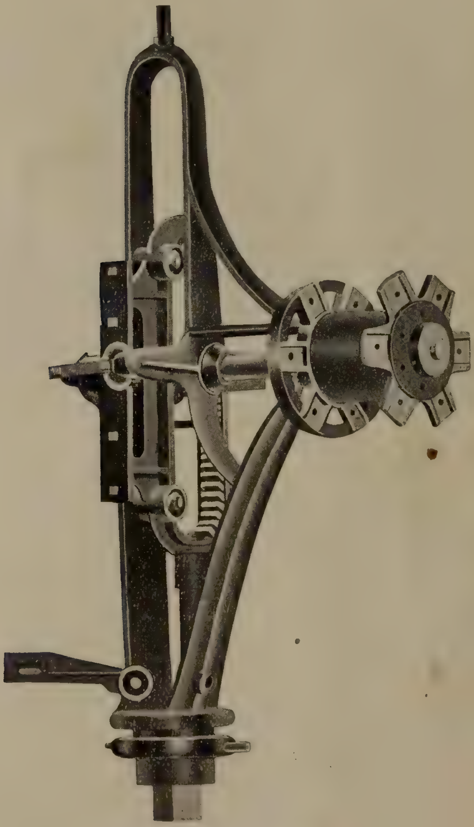
A PERFECT PUMPING WINDMILL



The "Imperial" is our leading pumping windmill. It has been on the market for a number of years, and has proven itself to be able to accomplish with ease what most mills have found an impossibility. We ask your careful consideration of the extracts contained in the succeeding pages of this catalogue, taken from the official report of the Royal Agricultural Society's trial of wind engines, which will give you a good idea why the "Imperial" has proven to be the "best pumping Windmill in the world."

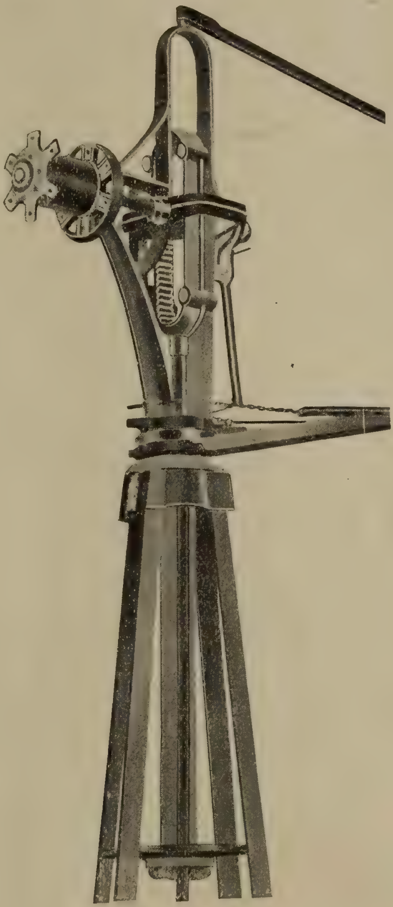
The "Imperial" is a production of our own, and is a credit to Canadian brains and Canadian enterprise. Nearly all products of our opposition are copies from American manufacture, while ours are our own inventions. That our efforts in giving the world up-to-date goods is appreciated, is shown by their generous patronage.

The "Imperial" is made in 8, 10, 12, 13, 16 and 20-foot sizes. Each mill has a set stroke as follows: 8 foot mill 8¼ in., 10 ft mill 14 in., 12 and 13 ft. mills 18 in., 16 ft. mill 23 in., and 20 ft. mill 36 in. The engine of the Imperial differs from all others in construction, design and general appearance, being composed of fewer parts, and less complicated than any other mill on the market. It is also neat in appearance, very compact, and strongly built, and built to stand any storm. No bolts are used in the construction of the engine, which has only one shaft, with two journals and bearings, which are very liberal in size, and of our Patent Roller Bearings and Steel Casing type. In the Imperial Mill the most troublesome part in all pumping windmills has been done away with, which is the crank pin. This part has called for more attention and oiling than all the rest of the mill, and made it necessary for the attendant to climb the tower many more times than would have been necessary had the mill been constructed after the lines of the Imperial. The crank pin is also very liable to become loose, and has been the cause of many wrecks, and besides the crank pin and pitman box are the parts of a pumping windmill to wear out first. The Imperial not having a crank pin or pitman box (as can be seen in cut of engine) and only two bearings (which are fitted with self-oiler) require less oil and



The Imperial Engine

less attention than any other pumping windmill on the market.



THE ENGINE—The engine consists of but few parts, the main ones of which are the frame, the shaft, the two bearings, the hub, brake wheel and lever, a small pinion, and the oblong or reciprocal gear which gives the mill the up and down motion. This method of securing the motion is unique and perfectly adapted to the purpose. The pinion revolves on its own axis, causing the reciprocal gear to move up and down, and the pinion being provided with cams, which compel the long gear to cross from one side to the other when reaching the ends, a steel track (as shown in cut) keep- the gears in perfect mesh. Thus the pump rod maintains an even speed throughout its cycle motion, which is not the case in a crank motion. In the latter case when the crank is leaving the top centre, the speed of the pump rod is scarcely perceptible, but it increases until it travels the first 45 degrees of its circle and decreases the next 45 degrees, until it reaches the bottom centre, after which it again increases to the third 45 degrees and decreases again on the fourth 45 degrees. It will thus be seen that when the speed is the greatest the leverage against the wheel is the greatest as the leverage increases at the same ratio as the speed. With the STRAIGHT LINE MOTION the length of time that the pump rod or pump plunger actually stops (which it must in changing from the downward to the upward) is reduced to the smallest possible space of time, and the result of this is it snaps up the valves of the pump very quickly, and holds them open until the end of the stroke, when they also close very quickly, and the speed of the water travelling through the pipes is maintained at an even speed. With the crank motion the plunger begins to travel so slowly that the valves do not act at once, resulting in a loss in the quantity of water. This can be demonstrated with an ordinary pump by taking hold of the handle, and beginning to move downward slowly increasing until you reach the centre, and again decreasing to the end of the stroke, a considerably smaller amount would be pumped than if a steady, strong motion were kept up from the beginning of the stroke to the end, especially if the cylinder is in a worn condition. With the crank motion the speed of the water in the pipes increases and decreases with the speed of the pump rod, it travelling at the greatest speed and offering the greatest resistance by friction in the pipe at the point when the mill gives the least power Another good feature in the STRAIGHT LINE MOTION is that a longer stroke can be used than in any other motion without decreasing the power, which necessitates the valves of the pump to open less frequently, resulting in the valves (which are the vital part of the pump) giving much longer service. THE STRAIGHT LINE MOTION is the only action that can be used successfully on a double-acting pump, as the mill has the same leverage in the down as it has in the up-stroke.

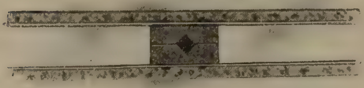
"THE IMPERIAL," a Pull-In Mill—To start an Imperial mill, it is necessary to pull it in to the wind to set it in motion. This can be done either by hand, using a reel fastened to a bottom post of the the tower, or automatically with a regulator. This arrangement is far superior and safer than the pull-out style, as in the latter style, should the wire break in a storm the mill would run away, and in all probability wreck itself before the storm subsided. Should the wire break on the Imperial mill, it would work just the opposite, and go out of the wind of its own accord and stop.

THE GOVERNOR—The governing is accomplished by means of a spring which performs two functions when the mill is pulled into the wind and locked in that position. The spring is only slightly stretched and when the pressure or velocity of wind increases, as it will in a gust, the mill will turn out of the wind, stretching the spring still more and remaining in that position until the wind again subsides, when the spring immediately draws the mill back again to face the wind. The governor working automatically in this manner, the speed of the mill is maintained as evenly as is possible, and it will not allow the wheel to run above a certain speed, making the mill perfectly safe in any storm. When the pull in wire is released the spring performs its other function and pulls the mill out of the wind. This is fully covered by our patent No. 63467.

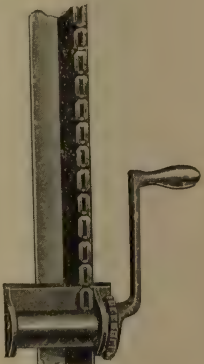
16 ft. Imperial. C. P. R. Outfit.

BRAKE—The brake works automatically and is independent of the vane. The mechanism that operates the brake is very simple and is so constructed that the moment the tension is applied to the pull-in wire the brake releases before the wheel can begin to run, and when the mill turns out of the wind the brake is applied gradually until the wheel is held firmly. The advantage of the brake working independent of the vane is when a sudden turning wind strikes the side of the vane causing it to turn slightly out of its natural position when the mill is out of the wind, in which case the wheel would revolve if the vane operated the brake, but with the "Imperial Brake" this annoying objection is overcome.

PULL-IN REEL—The mill is pulled into the wind by a simple contrivance, consisting of a windlass with ratchet conveniently bolted to one corner post of the tower. It is so simple and easy to operate that a child can handle it.



Pump Rod Guide



Pull-in Reel

General Agents and Salesmen

6. Each competitor will use his own discretion as to the diameter of wind vanes and the speed at which the engine shall run.

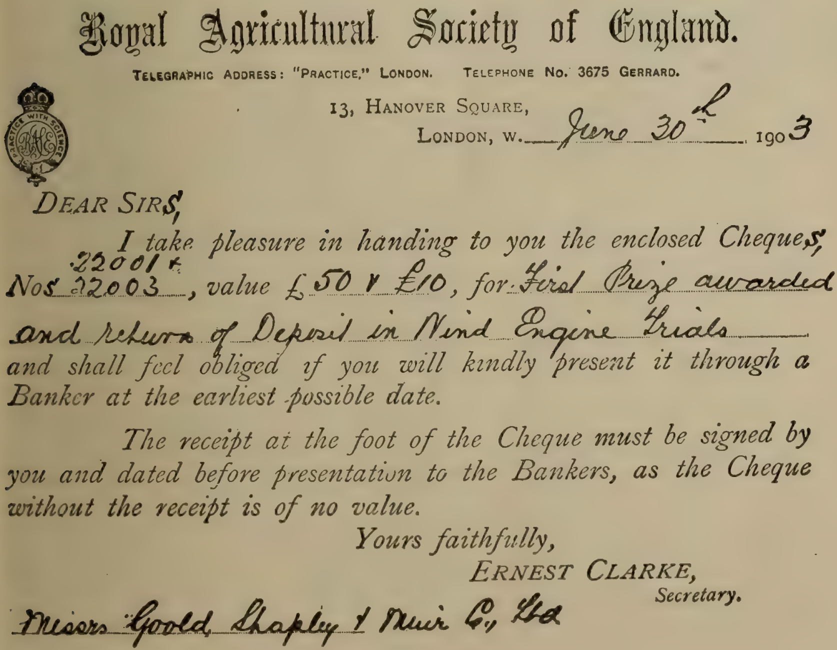
7. The points to which special attention shall be directed are:

(1) Stability of tower and cost of foundations.
(2) Regulation and self-governing.
(3) Ease of erection and maintenance.
(4) Size of wind engine relative to power.
(5) Price.

8. Competitors will be required to erect the engines and provide their own foundations.

9. The wind engines will remain in position until after the conclusion of the show. The competitors will not be required to pay for the space thus occupied.

10. The trials of the wind engines entered will commence in the new Permanent Showyard on Monday, March 2nd, being continued, at the discretion of the judges, until April 30th, 1903.



Royal Agricultural Society of England.

TELEGRAPHIC ADDRESS: "PRACTICE," LONDON. TELEPHONE No. 3675 GERRARD.

13, HANOVER SQUARE,
LONDON, W. June 30th 1903

DEAR SIRS,

I take pleasure in handing to you the enclosed Cheques, Nos 22001 & 22003, value £50 & £10, for First Prize awarded and return of Deposit in Wind Engine Trials and shall feel obliged if you will kindly present it through a Banker at the earliest possible date.

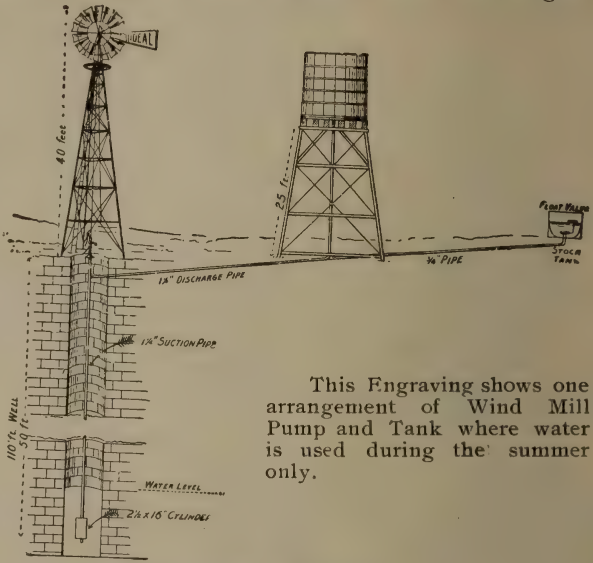
The receipt at the foot of the Cheque must be signed by you and dated before presentation to the Bankers, as the Cheque without the receipt is of no value.

Yours faithfully,
ERNEST CLARKE,
Secretary.

Messrs Goold Shapley & Muir Co, Ltd

Give Full Particulars

When writing for prices or for information about wind mills or pumps, be careful to give all the particulars you can for our assistance. In ordering repairs, take time to give both the number and description of the part, and if you are in any doubt, send the broken part charges prepaid, or make an outline drawing and send us. Always state the year you purchased machine and give the agent's name.



This Engraving shows one arrangement of Wind Mill Pump and Tank where water is used during the summer only.

Some Points to Cover

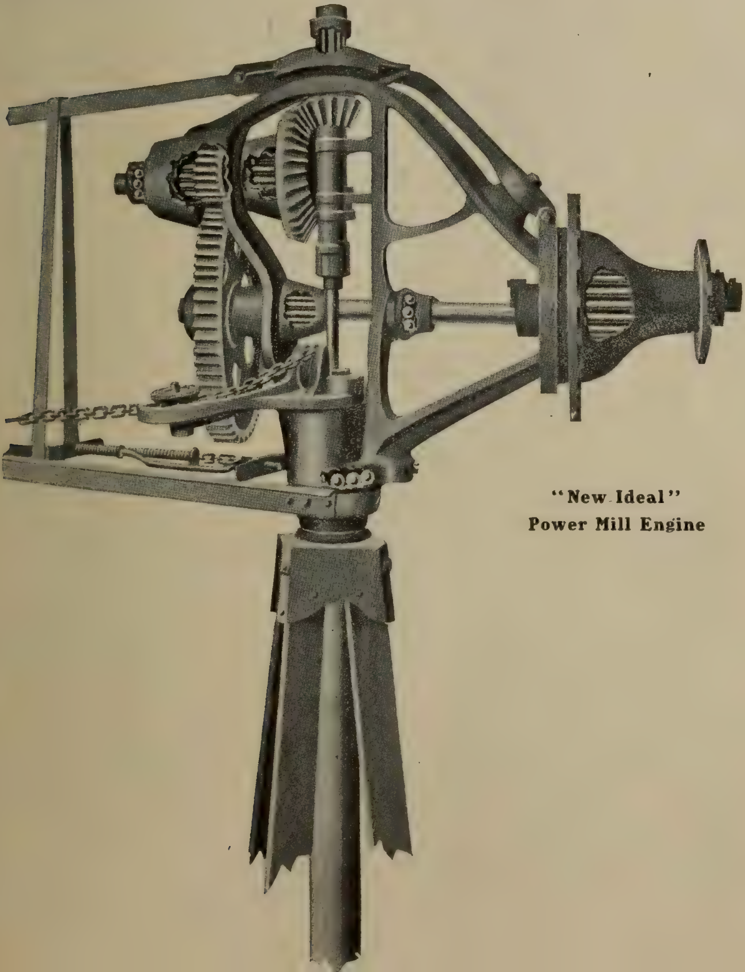
1. What is the distance from surface of ground to surface of water at low water mark?
2. What is the depth of your well?
3. How high do you want bottom of tank from ground?
4. At what distance do you want tank from well?
5. If you have tank, state height and distance from well.
6. What size mill do you think you want?
7. What height tower is necessary to place the mill at least 15 feet above all surrounding obstructions?
8. If you want tank state dimensions and capacity.
9. Do you want us to estimate upon the pumping outfit?
10. How many gallons of water do you want per day?

If for Power Mill, State:

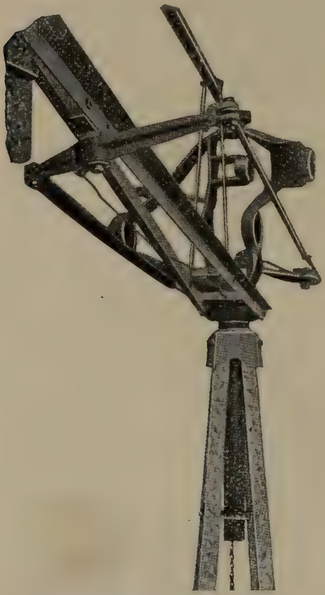
1. What machines you want to run. 2 If you want to pump water. 3. Location of well. 4. Is barn in good location? 5. What obstruction to the wind? 6. Height from floor to peak of roof. 7. Give rough drawing of ground plan of barn, location of well, position of house, etc.

Power Windmills

Steel Windmills for power purposes have long passed that stage of criticism as being a luxury, and is now conceded to be one of the best investments on the farm by owners of a first class mill.



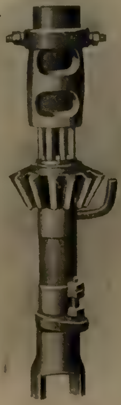
"New Ideal"
Power Mill Engine



Patent Governor on Power Mill

There are cheap grades of mills which have given a great deal of trouble to the owners, with that they condemn the whole lot as being very little good, and which has a certain influence in that neighborhood and makes a lot of their neighbors a little dubious. We have thousands of power windmills in operation which have and are giving their owners the best of satisfaction except in a very rare case. Of course, a mill cannot be put on any barn and be made to work satisfactorily, for circumstances sometimes make it an impossibility. For instance, if a barn has not the proper location so that a mill cannot be placed high enough to get the full benefit of the wind over all obstructions, such as trees, etc., it will not give good satisfaction. We have more power windmills in operation in Canada than all our competitors put together, which is a guarantee of the quality of the goods we are turning out, and the satisfaction they are giving to their owners. Wherever one of our power mills is introduced it invariably leads to further business from the immediate vicinity. Our power mills have reached the high position in public opinion they now control by doing what they were sold and represented to do. They will do your grinding, pulping, straw cutting, run your saw, pump your water, and in fact run any machine on the farm.

On page 31 is shown an open cut of the "New Ideal" power windmill engine. Any person who has made any study whatever of a power windmill cannot but notice the many points of advantage and superiority the "New



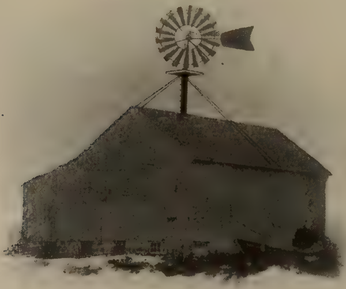
Power Windmill Pinion with Boxings

A. J. Newcombe, Upper Canard, N.S. 14-ft. Mill

Ideal" has over any competitor. You will notice the bevel pinion on the "New Ideal" is placed on top so that the bevel gears are always working into mesh. Now, in nearly every other power windmill built the bevel pinion is at the bottom side of spur gear, and it certainly has a tendency to work out of mesh, and which eventually it does and consequently the result is that the bevel gears cut out. Every unbiased person must admit that this is a great advantage, despite the arguments of our opposition to the contrary. You will also notice what a well balanced mill the "New Ideal" is, the wheel being placed on the opposite side to where the gears are—one counterbalances the other. We also call your attention to where the bearings are located. On the main frame are two long roller bearings, each one just inside of where the work required of it is done. On the shaft where the large bevel gear is situated a roller bearing is on each side of where the work is done, also a bearing on each side of the square pinion and one above and below the bevel pinion. Ball bearings are shown in the cut which take off any end friction or thrust, which gives the mill more power. The gears of the "New Ideal" are extra heavy, that on our 12-ft. and 13-ft. mills being as heavy as on nearly all other 14-ft. and 15-ft. mills. Provision is also made so that any slack can easily be taken up on the gears in case of wear. The turntable has large steel balls to carry the weight of the engine and they run in a chilled track. These allow the mill to adjust itself to the wind very quickly and consequently gives increased power.

Power Windmill Pull-in Reel

The "New Ideal" will stop itself should the pull-in wire or chain break in a storm. If the wire should break it immediately lets the wheel turn around to the vane and applies a positive brake which stops the wheel from turning. There is no possibility of our mill



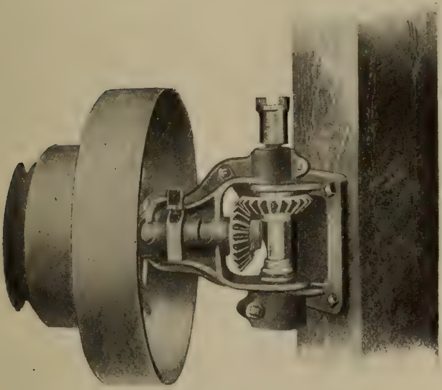
Outfit of Stephen Draper, Sutton, Ont.

running wild with no chance of stopping it until the wind goes down, as is the case with other mills. Any person can see what a distinct advantage this is to any mill.

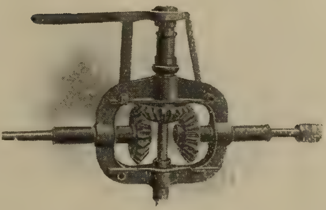
The governing is accomplished by means of a spring which performs two functions when the mill is pulled into wind and locked in that position. The spring is only slightly stretched and when the pressure or velocity of the wind increases, as it will in a gust, the mill will turn partially out of the wind, stretching the spring still more, and remaining in that position until the wind again subsides, when the spring immediately draws the mill back again to face the wind. The Governor, working automatically in this manner, the speed of the mill is maintained as evenly as is possible, and it will not allow the wheel to run above a certain speed, making the mill perfectly safe in a storm. When the pull-in wire is released the spring performs its other function and pulls the mill out of the wind, and an automatic lock secures the mill and vane together, and the brake keeps the wheel from running while out of the wind. Fully covered by patent 63467.

Outfit of J. & O. Kidston, Chipman Co., N.S.

The brake works automatically and is independent of the vane. The mechanism that operates the brake is very simple and is so constructed that the moment the tension is applied to the pull-in-wire the brake releases before the wheel can begin to run, and when the mill turns out of the wind the brake is applied gradually until the wheel is held firmly. The advantage of the brake working independent of the vane is, when a sudden turning wind strikes the side of the vane, causing it to turn slightly out of its natural position when the mill, if out of the wind, in which case the wheel would revolve if the vane operated the brake, but with the "New Ideal" brake this objection is overcome.



Swinging Foot Gear



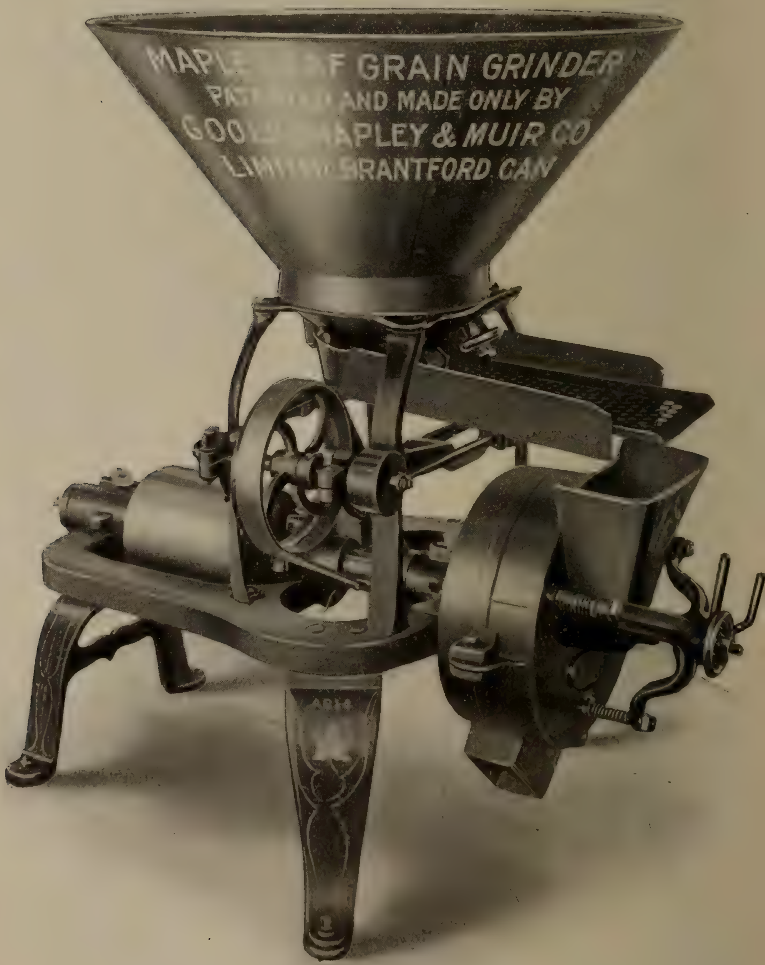
Foot Gear

The life and success of a windmill depends to a great extent on the care it receives. Some purchasers of windmills are neglectful in the examination of their outfits often enough, to see that it is properly oiled, the nuts all tight, etc. Good oil should be used and often at every point of friction. Use grease on the cogs and on the gears. In winter a little coal oil should be mixed when the oil is too thick so as to make it run freely. Windmill oil will stand 30 degrees below zero before thickening.

As little line shafting as possible should be used as it uses up a lot of power. Our line shafting runs in roller bearing boxings, which is a great advantage, as they do away with considerable friction and require less oil.

Maple Leaf Grain Grinders

8, 10, 11, 13 and 15 inch Burrs



There are thousands of these celebrated grinders in use, which are giving the very best of satisfaction. These grinders have been the production of many years of careful study and experimenting and it is very doubtful if any other grinder with the same size burr can grind nearly as much grain as the Maple Leaf. They are also largely used by wholesale drug and spice houses for grinding spices, roots, etc., as well as by threshers, farmers, dairymen, etc. They can be run with almost any kind of power from two horse power up.

The Stationary Burr Shifts—The inside or driven burr is not shifted to regulate the fineness of grinding as is the case with other grinders. In consequence, the axle which drives the burr is not moved forward or backward. This improvement overcomes a very undesirable feature common to other grinders. On the improved "Maple Leaf" the stationary burr is moved backward or forward, and is provided with relief springs and a breakable pin which insures against broken burrs if hard foreign substances get in between the burrs.

Ball-Bearing Plates—We have adopted the famous ball bearings which have given such a wonderful reputation and large sale for our Steel Wind Mills, and applied them to the point where the pressure is put on the burrs to hold them to their work. Every man who has had any experience with grinders knows the great friction at this point, and consequent loss of power. Our ball bearing almost does away with this loss, and also will make the grinder much more lasting, for it cannot wear. This is a wonderful improvement, adding greatly to the value of the grinder, and must be seen in use to be half appreciated.

This Ball Bearing is placed at the back end of the shaft and runs in a hardened steel race or track. It will not heat even if driven at a high rate of speed.

Flexible Plates—The plates are flexible. This ensures the burrs running true and even, as they have an even grinding or bearing surface. In consequence the burrs are more durable, and will do more perfect grinding. Rigid burrs often touch at one point and wear there, and also open at the opposite point and let grain through without grinding it.

Adjustable Shake—This works like a charm and can be adjusted according to the speed and kind of work; in consequence the grinder can be run with any kind of power.

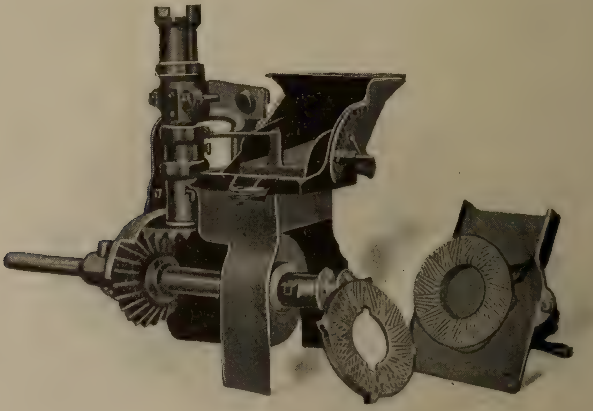
We can supply special Grinder Catalogue to interested parties.

Ideal Duplex No. 8 Post Grinder

For Wind Mill Power.

This consists of an iron frame in which the shaft and gearing apparatus is arranged in the simplest and most substantial manner. The burrs are double, having four grinding surfaces, and made small in diameter for the purpose of doing the work near the centre, where the leverage is greatest—a decided advantage over single burr mills, having large plates that do the grinding far away from the centre, an important matter when running at low speed.

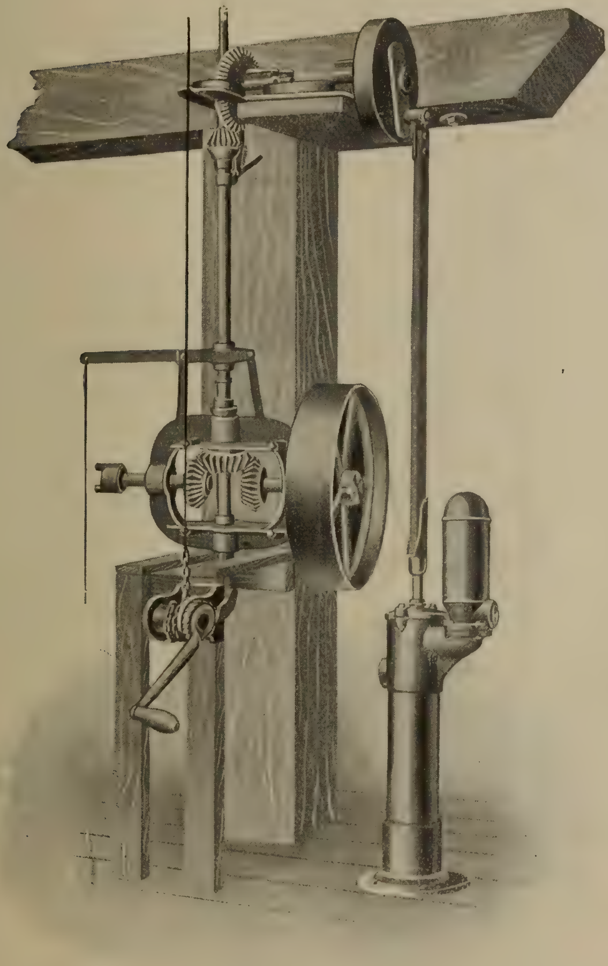
The burrs are easily and quickly taken out and put in the mill by removing the end plate The grain is fed to the burrs by the shake feed, which distributes it fast when the speed is high and slow when the speed is down, thus regulating the quantity in proportion to the power exerted by the wind force.



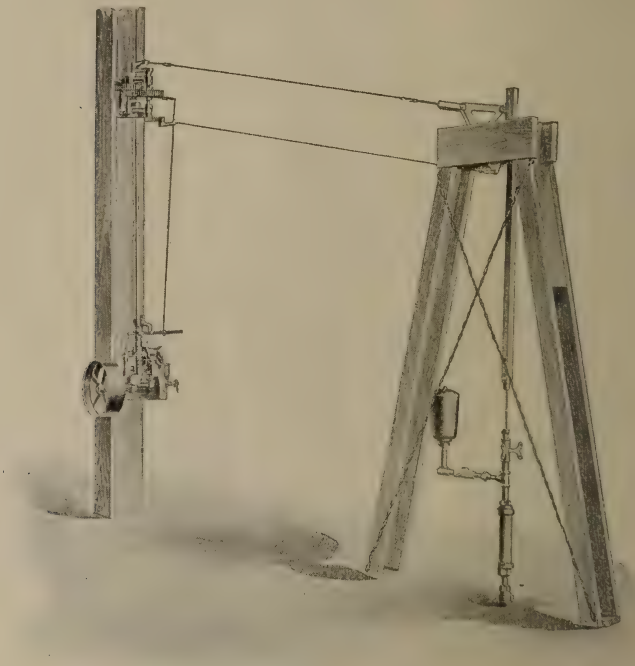
The Post Grinder is much the best of its class, and will grind as high as 15 to 20 bushels per hour. If more work is required, order the Junior, 8 in., or Senior, 10 in., Maple Leaf Grinder for use with power windmill.

While this mill is intended more especially for wind mill power, it can be used as a belt power mill and run by any other power than wind power with good results.

PUMP GEARS



"Ideal" Pump Gear--The "Ideal" Pump Gear with internal gear shown in engraving with foot gear and pump reduces the speed 9 to 1 from that of the vertical shaft to which it is attached. It can be placed at any convenient height above foot gear and is the best for use where the well is over 28 feet deep and is outside and near the barn or building on which the wind mill is placed, and is usually connected to the pump by woodpump-rod and one or more iron elbows.

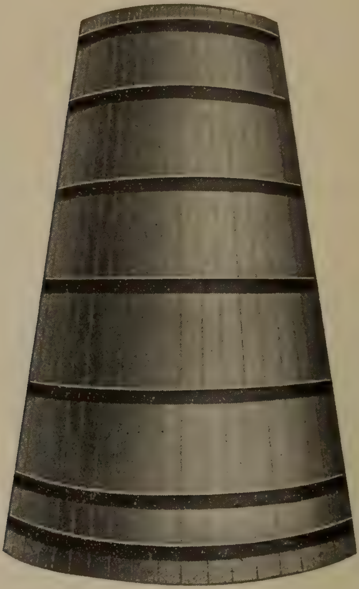


Muir's Jack

"Muir's" Jack—Where the well is deep (over 28 feet) or on a lower level than the place where the wind mill sets so that the water cannot be drawn by suction, the best arrangement is our "Muir" pump jack with triangles and heavy steel wire to connect from pump jack at the mill to triangle on tower over well.

WOOD TANKS

The manufacture of wood tanks is one of our leading departments. Our lumber yard is well stocked with well seasoned tank material free from sap, shake, unsound knots or any foreign matter which may cause leakage or decay. All joints are machine made and in perfect alignment, and all staves are of full length without splicing. We make round



tanks from five barrels to twenty-five hundred barrels capacity, for all purposes, as well as half-round and square. We also make flat and conical covers of all sizes and different

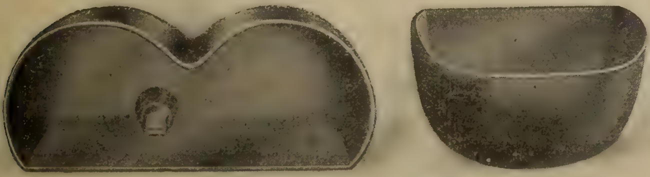
designs. We make a specialty of supplying steel towers for all sizes of tanks for railroads, town water supply, fire protection, etc.

Galvanized Water Boxes

With Special Shut-Off Valve

Inside of A. W. Vansickle's Barn
Wintered 98 Head of Cattle

Every stock breeder or feeder desiring a complete outfit and wishing to get the best results from a water system should put in water boxes in each stall and have these automatically regulated from the main supply tank by a float or valve in a small barrel or tank properly placed. In this way the stock can always have water and astonishing results are attained from animals having sufficient water when wanted and of a proper temperature. We supply single galvanized iron boxes for single or box stalls, or double boxes for 2 stalls. The accompanying illustrations show both styles.

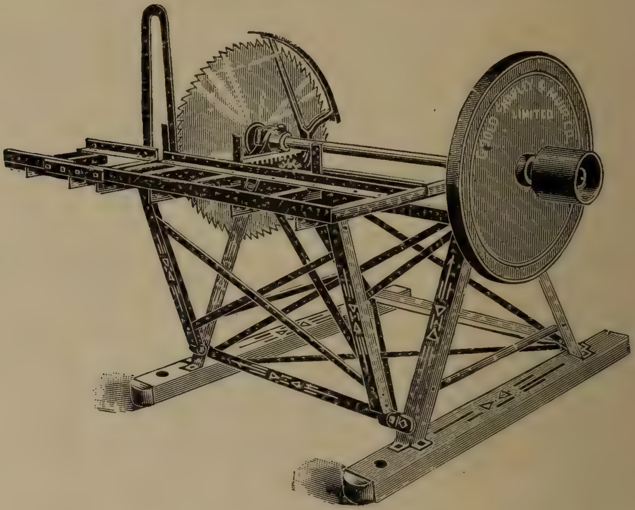


Each of these water boxes is provided with a special shut-off valve to prevent the water flowing from one box to another and thus avoiding any risk of carrying infection from one animal to another.

The value of galvanized boxes is double that of plain iron boxes in lasting qualities and they will not discolor the water.

The Brantford Steel Frame Wood Saw

Strong, Simple, Safe, Satisfactory



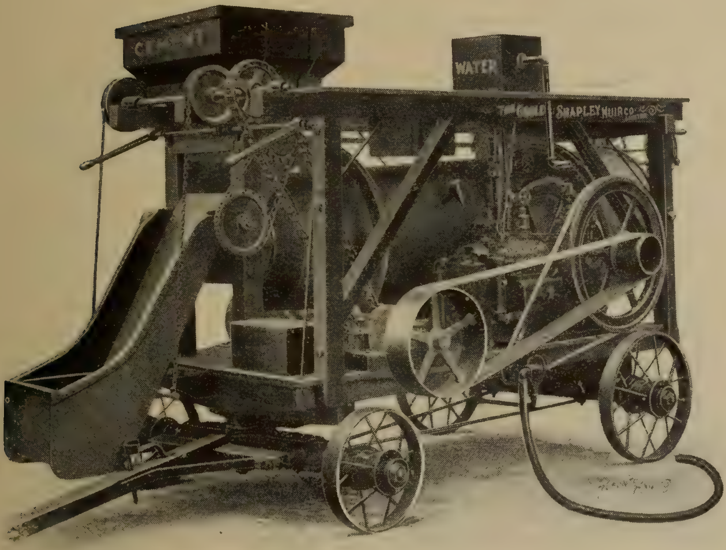
Size of pulley 5x5 or 6x6 as desired. Speed required, 1,000 to 1,500 revolutions a minute. Weight of frame without saw blade or extension roller, 225 pounds.

The above cut shows the Brantford Steel Wood Saw Frame complete with saw blade and extension roller outside the saw. This extension roller enables the user to saw poles as safely as cordwood, and with great rapidity. If desired, we furnish the frame with extension roller at an increased price. The frame is adapted to any size of blade from 20 inches to 28 inches in diameter.

The frame is of great strength and rigidity. Has a heavy cast iron guard over blade to prevent injury to operator —patented adjustable dust proof oil boxes which never heat— in fact, all our latest improvements in Wood Saw construction combined with a handsome finish. We believe this is the best Saw Frame now in the market. It is sure to please.

We can furnish this Saw Frame galvanized after completion for $1.50 extra. By removing or covering the saw blade the galvanized frame can be left out doors as long as desired.

Cement-Concrete Mixer



The mixer is constructed on the automatic principle and is a marvel of ingenuity and utility. We have succeeded in producing a machine which will automatically measure the proper amount of cement with a given quantity of gravel, and also to automatically insert sufficient water inside of the machine to properly wet the mixture to any desired consistency, and this result has been attained with this machine to a nicety. It is mounted on a steel truck and can be readily moved from place to place.

In front of the machine the gravel hopper is placed so that it is low down and very handy for the operator to shovel in the material. On top of the machine above the gravel hopper is placed another hopper which holds the cement, when the desired quantity of gravel is in the hopper for this purpose it is tripped by means of a lever and is raised up until the gravel dumps into the large main drum of the mixer and as this gravel hopper is being raised it automatically turns a cylinder which is in the bottom of the cement hopper and the cement is dumped in with the gravel into the long drum. This cylinder under the cement hopper is so arranged that it can be set to dump cement in any desired proportion from 12 to 1 to 2 to 1, and will automatically do this until the adjustment is changed making a new mixture.

If interested write for further information.

A Few Testimonials

Harry Ramsay, Brantford, Ont.
Surburban Outfit.

Messrs. Goold, Shapley & Muir
Co., Ltd., Brantford, Ont.

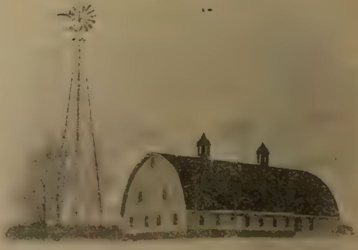
Gentlemen, — The power mill I bought from your agent Mr. Bossenbury has given me the best of satisfaction both in grinding and pumping. I grind from 25 to 30 bushels an hour with an ordinary good wind. I have a 14-ft. wheel and a Maple Leaf Jr. Grinder.

I have never had any trouble with it and would recommend it to anyone wanting a mill.

Yours truly,

DAVID SCHNELL,

Zurich, Ont.



C. C. H. Eaton, Canard, N.S.

Messrs. Goold, Shapley & Muir Co.,
Brantford, Ont.

Gentlemen,—In reference to the Junior Maple Leaf Grinder of your make, it is to my idea, the best machine made to-day. I have just put through 4000 bushels of grain and am sending you a small sample of oats and barley of the last that went through, and only used one set of plates and they are good for quite a lot more work yet.

I think anyone wanting a grinder will be wise to buy the Maple Leaf made by G. S. & M. Co. Of course all this grinding was done with my New Ideal 14-ft. windmill.

Yours truly,

W. F. HOWELL, Eburne, B. C.

A. C. McPhail, Brandon, Man.

BRANDON, April 8th, 1905.

Messrs. Goold, Shapely & Muir Co.,
Brantford, Ont.

Gentlemen,—In answer to your inquiry respecting the 13-ft Ideal Windmill purchased from you three years ago, may say that up to date it has given me the very best of satisfaction, and the post grinder does all that it was guaranteed to do. The mill is strong and durable, having cost me nothing for repairs so far. Works with a very light wind, and in a heavy wind will take care of itself as represented. I have very much pleasure in recommending the Ideal to any intending purchasers.

Yours truly, (Signed) A. C. McPHAIL.

BRANDON, Man., Feb. 25, 1905.

Goold, Shapley & Muir Co., Brantford, Ont.

Gentlemen,—I have used one of your 14-ft. Ideal Windmills and 10-inch Maple Leaf Grinder for the last seven years, and have had good satisfaction. But would recommend purchasers to only put in an 8-inch grinder which would be easier in the shafting and gears, and have no hesitation in recommending it to anyone requiring a windmill.

Yours truly, H. McEACHREN.

BRANDON, Man., Feb. 28, '05

Goold, Shapley & Muir Co.,
Limited, Brantford. Ont.

Dear Sirs,—The 14-ft. Ideal power windmill purchased from you three years ago, has given me entire satisfaction. It is very strongly made, and I consider the ball and roller bearings a great advantage, giving it more speed in a light wind. I have been using with it an 8-inch Maple Leaf Grinder and find no difficulty or want of power to drive it. I am also using one of the Goold, Shapley & Muir 12-inch grinders with my engine, and find it perfectly satisfactory and quite up to the capacity guaranteed. I have much pleasure in recommending your goods to intending purchasers.

Yours truly, JOHN McCALLUM.

John McCallum, Brandon, Man.—14-ft. Mill.

Joseph Doupe, Brandon, Man.—13-ft. Mill.

Messrs. Goold, Shapley & Muir Co.,
Limited, Brantford, Ont.

Gentlemen,—Having purchased a 13-ft. Windmill and Post Grinder from your agent, T. A. Hamer, last November, it has given me first-class satisfaction in every way, and I think it is a great advantage to run the post grinder from a separate foot gear, and also think the mill perfectly safe the way it is operated to the wind.

JOSEPH CARR,

Oak Ridges, Ont.

Messrs. Goold, Shapley & Muir Co., Ltd., Brantford, Ont.

Gentlemen,—This is to certify that the 13-ft. power mill and post grinder that I purchased from your agent, T. A. Hamer, last November, has given good satisfaction, and I think it is the most safely operated mill made. Yours truly, CHAS. WRIGHT, Pine Orchard, Ont.

BRANTFORD, Ont., April 20, 1905.

Messrs. Goold, Shapely and Muir Co., Ltd., Brantford, Ont.

Gentlemen,—In regard to my windmill, I am well satisfied with it. It does all my work and in large quantities. It saws my wood, grinds my grain and pumps my water, etc. WILFRID LOISEL, Richelieu, Que.

MARIPOSA, Ont., Feb.27,'05

Messrs. Goold, Shapley & Muir Co., Ltd., Brantford, Ont.

Dear Sirs,—Words cannot recommend too highly the 14-ft. New Ideal and steel tower outfit erected on my barn by Thos. Lane. It is not only a beauty to look at, but does far more than was claimed for it. I run an 8-inch Maple Leaf Grinder, cutting box and anything in my barn with the greatest of ease. The roller and ball bearings are a great feature in a windmill. Those needing power can do no better than invest in an Ideal Brantford.

(Signed) CHARLES H. KNIGHT.

Provincial Government Asylum, Brandon, Man.—15-ft. Mill.

A. W. Vansickle, Onondaga, Ont.—15-ft. Mill

NORTH CORNER.

Messrs. Goold, Shapley & Muir Co.,
Brantford, Ont.

Gentlemen,—I bought of your agent in 1900 one 13-ft. power windmill. After testing it for over four years, I am satisfied that it is a good investment. It has cost me nothing yet but the oil to run it. I have ground over thirteen thousand bushels of grain since set up, draws water for house and barn, saws all our wood, cuts feed, pulps roots, and is well calculated to do many other things to lighten labor on a farm and lessen expenses. I consider it the cheapest power in existence. With the Maple Leaf Grinder I am well pleased. It will grind 20 bushels an hour and do it well with a 13-ft. wheel.

Taking all into consideration, I am pleased to recommend to my brother farmer the New Ideal Brantford Steel Windmill for durability and power. (Signed) A. B. NORTH.

CANBORO, Ont.

Messrs. Goold, Shapley & Muir Co.,
Limited, Brantford, Ont.

Gentlemen,—Referring to the 13-inch plate mill grinder which you supplied me about two months ago, am pleased to say that it fully meets my requirements. It runs light and grinds fine. JOHN MOWER.

AYR, Ont., Jan. 30, 1905

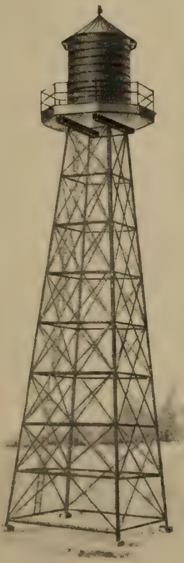
Goold, Shapley & Muir Co.,
Brantford, Ont.

Dear Sirs,—I might say that I am more than pleased with the outfit. It runs very nicely. (Signed) A. E. SCOTT.

MARIPOSA, Ont., Feb. 25, 1905

Messrs. Goold, Shapley & Muir Co.,
Brantford, Ont.

Gentlemen,—The 8-ft. Imperial pumping outfit which I purchase from your representative last season is giving the very best of satisfaction and runs in as light a wind as anything I have seen. As a labor saving investment there is none better. I recommend the Imperial to all those requiring pumping outfits. (Signed) WILSON J. WEBSTER.



Outfit of J. Rittenhouse, Jordan, Ont.

MARIPOSA, Feb. 25, 1905

Messrs. Goold Shapley & Muir Co., Limited
Brantford, Ont.

Gentlemen,—Last season I purchased from Thos. O. Lane one of your 14-ft. New Ideal and Steel Tower outfits, which is driving an 8-in. Maple Leaf Grinder. I am thoroughly satisfied with my investment. It seemed like quite an outlay on the start, but for cheap and efficient power I have no hesitancy in recommending a Brantford New Ideal.

(Signed) W. BERTRAM GRAHAM.

Trial in South Africa. Awarded First Prize.

KILLARNEY, Man., March 21, 1905

Goold, Shapley & Muir Co., Limited
Brantford, Canada

Gentlemn,—The 12-ft. Brantford Ideal Windmill I purchased from your agents Messrs. Winram & Weir, is giving entire satisfaction. Since erected in December it has ground 700 bushels of mixed grain besides pumping water for over seventy head of stock. It pumps in a very light wind, in fact we have had to pump by hand only four times in nearly four months and I have no tank. The only thing that I am sorry for is that I didn't get one years ago. Wishing you every success, I remain,

Yours, truly,

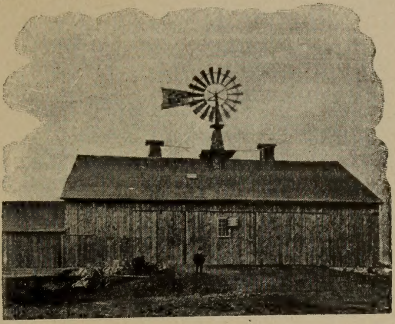
SAM T. KELLOWAY.

OAK RIDGES, Ont.

Messrs. Goold, Shapley & Muir Co.
Brantford, Ont.

Gentlemen—The 13-ft. Power Mill and Post Grinder I purchased from your agent T. H. Hamer, last November, has filled the bill in every respect and I can heartily recommend it to any of my neighbors wanting a good outfit, and think it is much the safest operated mill in the market, for I had previously another make of mill.

THOS. BARBER.



Outfit of George Black, Ayr, Ont.

AYR, Ont., April 7, 1905

Goold, Shapley & Muir Co.,
Limited, Brantford, Ont.

Gentlemen,—The sixteen ft. "New Ideal" Power Mill which I purchased from you last April has given me the very best of satisfaction. I run one of your Maple Leaf Grain Grinders drag saw, cutting box, etc., and have all the power I require. As you are aware this mill took the place of a twenty-ft double-header wooden mill, and I can get far better results from my sixteen-ft. You certainly have the governing of a windmill down to perfection.

Wishing you every success, I am, Yours truly,

GEORGE BLACK, Ayr, Ont.

BALDUR, Man., March 22, 1905

Goold, Shapley & Muir Co., Limited
Brantford, Ont.

I bought one of your 15-ft wheel Ideal Windmills two years ago. It has given me first-class satisfaction in every way, and has not cost anything for repairs. I have done a lot of work with it myself, as I keep a large stock of horses and cattle. I have also done a large amount of custom work which will almost pay for the mill.

I can recommend the Ideal Mill to all intending purchasers. I had a gasoline engine, 3 h. p., before I had the windmill and I can heartily recommend the latter as the cheapest power.

Yours truly, A. E. CRAMER.

CARNDUFF, May 7, 1905

Messrs. Goold, Shapley & Muir Co.
Brantford, Ont.

Dear Sirs,—I received one of your Ideal Windmills four years ago, and am glad to say it has proved every success to me. I run a post grinder and cutting box with it. It has cost me nothing except for oil and plates.

Yours truly,

(Signed) WALTER BUSH.

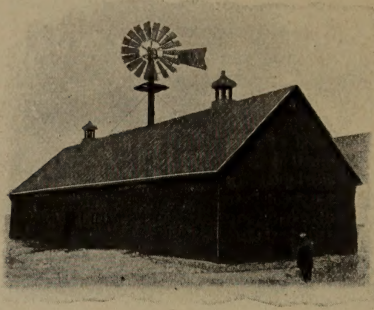
PLYMTON, Man., April 20, 1905

Messrs. Goold, Shapley & Muir Co., Ltd.
Brantford, Ont.

Gentlemen,—In reference to the 8-ft. Ideal Pumping Mill purchased from you a little over a year ago, I have used this mill continually and there has not been a day that I have been unable to pump water. It has given me the very best of satisfaction, and to anyone requiring such an outfit I can readily recommend the Ideal.

I remain, Yours truly,

WILLIAM LEWIS.



Outfit of Wilfrid Loiselle, Richelieu, Que.

KESWICK, March 14, 1905

Goold, Shapley & Muir Co.,
Brantford, Ont.

Dear Sirs,—It affords me much pleasure in recommending your Ideal 14-ft. Windmill, which has been of great value to me, besides running two pumps and also a grindstone, root pulper, circular saw cutting wood, cutting box, and one Junior Maple Leaf Grinder, all with the windmill. With a good wind I can grind at the rate of 35 bushels of barley per hour. I have used the mill for four years and have had no repairing to do and it has not worn any yet. (Signed) STEPHEN DRAPER.

DRYSDALE, Ont.

Messrs. Goold, Shapely & Muir Co., Limited, Brantford, Ont.

Gentlemen,—I have a power mill that I bought from your agent, E. Bossenbury, in the fall of 1903, and I am pleased to say that the mill has given me entire satisfaction both in grinding and pumping without any bother whatever, and I would recommend the above mill to any person who should require one. I have repeatedly ground between 30 and 40 bushels to the hour. (Signed) JOHN LAORTE.

CANARD, Kings County, N. S.

Goold, Shapley & Muir Co., Brantford, Ont.

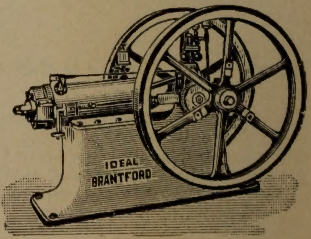
Gentlemen,—Years ago I purchased one of your 8 h. p. gasoline engines and run it with every satisfaction, doing a large amount of threshing, grinding, etc. Last autumn I decided to put in a heavier one, and after examining all the different makes of American and Canadian engines, I decided that your "Ideal" was the best of the lot, so I ordered one of your 12 h. p. engines and have it running now and am proud of it. I am of the opinion there is nothing better manufactured yet.

(Signed) FRANK E. DICKIE.

We also manufacture

" IDEAL " GAS AND GASOLINE ENGINES.

If interested, write for Illustrated Catalogue.



Hurley & Watkins, Printers & Bookbinders, Brantford